



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D3121-143
Job Sheet 169353



Part No: D3121-143

Job Qty: 4 ea

Part Name: Bracket Assembly



SCRAP

Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 12/8/17

Job Tracking No:

Due Date: 1/3/18

Created By: Mario Poulin

Type: SOLD

Description:

Customer: Black Tusk Helicopters Ltd (CBLAC03)

PO Box 1469, 46041 Government Road Squamish, BC, V8B 0B1 Canada ph:(604) 898-4800

Note: DWG REV E IPP Rev:Pick:A 04.02.18 New issue KJ/DS IPP Rev:B ECN 1060 07-11-12 DD verified by:EC IPP
Rev:C New Dimensions for Blank Size 08-07-23 JLM Verified By:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	4 Ea	1/2/18	1/2/18	0.00	0.00	Start Up Machining-1		
100	Bandsaw	4 pcs	1/2/18	1/2/18	0.00	1.47	Bandsaw1		
110	CNC Vertical Machining	4 pcs	1/2/18	1/2/18	0.41	8.51	HAAS1-3		
120	QC	4 pcs	1/2/18	1/2/18	0.00	0.00	QC2 Machining-1		
130	QC	4 pcs	1/2/18	1/2/18	0.00	0.00	QC8 Machining-1		
140	Small Fab	4 pcs	1/3/18	1/3/18	0.00	0.18	Small Fab-2		
150	QC	4 pcs	1/3/18	1/3/18	0.00	0.00	QC5		
160	Packaging	4 pcs	1/3/18	1/3/18	0.00	0.00	Packaging3-1		
170	QC21-SA	4 Ea	1/3/18	1/3/18	0.00	0.00	QC21		

Part Op 100 - Cut blanks: (1.250" x 2.000") 4.425" long -> 135447

Descriptions: 110 - 1-Machine D3121-113 as per Folio FA330 and Dwg D3121

140 - Assemble D3121-143 as per Dwg D3121.

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M17-4-B1.250X02.000	1	9	0	0
140-Small Fab	D3121-21	8	50	0	0
	D3121-241	8	25	0	0

Part Specifications

Specifications could not be found.

SCRAP

m174 62.500x1.250
m135447 x4

Plex 12/8/17 10:08 AM dart.poulin.mario

1625

DART
AEROSPACE
S033639

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Bracket Assembly

PART NO: D3121-143

Original Serial #: S033639

Revision:

Operation: Start up Operation 01/19/18

Change No:

Job No: 169353

QARCS

DART AEROSPACE LTD		Work Order:	
Description: Bracket		Part Number:	D3121-113
Inspection Dwg: D3121 Rev: E		Page 1 of 2	

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.080	+/-0.010	.082	✓		Vernier	
0.300	+/-0.010	.301	✓		Vernier	
R0.375	+/-0.010	R.375	✓		Gabarit	
1.54	+/-0.030	1.542	✓		high gage	
0.350	+/-0.010	.355	✓		pin + high gage	
R0.25	+/-0.030	R.250	✓		Gabarit	
Ø0.392	+0.002/-0.000	.392	✓		micrometre	
Ø0.201	+/-0.010	.197	✓		pin gage	
2.540	+/-0.010	2.539	✓		Vernier	
1.590	+/-0.010	1.590	✓		Vernier	
0.160	+/-0.010	.159	✓		Vernier	
0.400	+/-0.010	.393	✓		Vernier	
1.220	+/-0.010	1.213	✓		Vernier	
1.600	+/-0.010	1.601	✓		Vernier	
3.80	+/-0.030	3.789	✓		Vernier	
1.800	+/-0.010	1.802	✓		Vernier	
R0.50	+/-0.030	R.50	✓		Gabarit	
0.130	+/-0.010	.131	✓		Vernier	
3.41	+/-0.030	3.346	✓		Vernier	
3.65	+/-0.030	3.628	✓		high gage	
2.24	+/-0.030	2.215	✓			
45°	+/-0.1°	45°	✓		Gabarit angle	
R0.25	+/-0.030	R.250	✓		Gabarit	
3.97	+/-0.030	3.965	✓		high gage	
R0.38	+/-0.030	R.380	✓		Gabarit	
Ø0.392	+0.002/-0.000	Ø.393	✓		micrometre	
Ø0.201	+/-0.010	Ø.208	✓		pin gage	
0.268	+/-0.010					
R0.260	+/-0.010	R.260	✓		Gabarit	
0.080	+/-0.010	.082	✓		Vernier	
0.300	+/-0.010	.299	✓		Vernier	
0.381	+/-0.010	.379	✓		Vernier	
0.201	+/-0.010	.202	✓		Vernier	
0.580	+/-0.010	.577	✓		Vernier	
0.400	+/-0.010	.398	✓		Vernier	

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; font-size: small;"> <tr> <td>Skid-tube</td><td>☐</td> <td>Cross tube</td><td>☐</td> <td>Water Jet</td><td>☐</td> <td>Engineering</td><td>☐</td> </tr> <tr> <td>Machining</td><td>☒</td> <td>Small Fab</td><td>☐</td> <td>Prod. Eng. Coord.</td><td>☐</td> <td>Quality</td><td>☐</td> </tr> <tr> <td>Thermoforming</td><td>☐</td> <td>Finishing</td><td>☐</td> <td>Rec/Store/Packaging</td><td>☐</td> <td>Other</td><td>☐</td> </tr> <tr> <td>Large Fab</td><td>☐</td> <td>Composite</td><td>☐</td> <td>Supplier</td><td>☐</td> <td></td><td></td> </tr> </table>						Skid-tube	☐	Cross tube	☐	Water Jet	☐	Engineering	☐	Machining	☒	Small Fab	☐	Prod. Eng. Coord.	☐	Quality	☐	Thermoforming	☐	Finishing	☐	Rec/Store/Packaging	☐	Other	☐	Large Fab	☐	Composite	☐	Supplier	☐		
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Date : 18/1/26		Step #: 110		QTY Effective : 4			MRB (QSI042) Approval DAS 12 9-89 18/1/26 Completed By [Signature] 18/01/31																																		
Description Work Order Deviation				Disposition				Lead hand / Supervisor Approval Verification [Signature] 18/01/31																																	
Parts were machined with the wrong countersink tool (90° instead of 100°). Parts were re-machined with correct tool but resulting countersink is too deep.				Scrap. Resulting strength is too weak per SR-D412-698-1 Rev.A				QC / QA Coordinator Approval DAS 9 9-89 18-01-31																																	
Root Cause		FAULT CATEGORY																																							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐																														
Design	☒	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐																														
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐																														
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☒	Weld	☐	Part Incorrect	☐																														
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐																														
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐																														
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐																														
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐																														
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐																														
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐																														
Past Expiry Date	☐	Manufacturing Process	☐																																						
Misidentified	☐	Past Due	☐	OTHER : _____																																					